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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,436	07/18/2003	Josef Ruppert	8178	4973

7590 11/29/2004

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EXAMINER

ABDELWAHED, ALI F

ART UNIT

PAPER NUMBER

3722

DATE MAILED: 11/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/622,436

Applicant(s)

RUPPERT, JOSEF

Examiner

Ali Abdelwahed

Art Unit

3722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18, 20-22 and 26 is/are rejected.
- 7) ☒ Claim(s) 19 and 23-25 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/4/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: Drawing attachment.

DETAILED ACTION

Claim Objections

Claims 21, 22, 25, and 26 are objected to because of the following informalities:

It is suggested that in:

Claim 21, line 3, delete "cutter" and insert --cutters--.

Claim 22, line 2, delete "cutter" and insert --cutters--.

Claim 25, line 2, reference character "s3" should be in parentheses.

Claim 26, line 2, delete "cutter is" and insert --cutters are--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6-8, 12-18, 20-22, and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 6-8 recite the limitation "the groove base" in line 2. There is insufficient antecedent basis for this limitation in the claims.

Claims 12-14 recite the limitations "the path" and "the increasing diameter" in lines 1 and 2. There is insufficient antecedent basis for these limitations in the claims.

Claims 15 and 16 recite the limitation "the course" in line 1. There is insufficient antecedent basis for this limitation in the claims.

Claim(s) 17 and 18 depend from rejected claim(s) 15 and include all of the limitations of claim(s) 15 thereby rendering these dependent claim(s) indefinite.

Claim 20 recites the limitations "the area", "the bore", and "the heels" in lines 3 and 5. There is insufficient antecedent basis for these limitations in the claim.

Claim 21 recites the limitation "the area" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claims 22 and 26 recite the limitation "the clearance angle" in lines 1 and 2. There is insufficient antecedent basis for this limitation in the claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-18 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S.

Patent No. 4,662,803 to Arnold.

Arnold discloses a drilling tool (10) with a chip groove (see drawing attachment, fig.1), a first bit stage designed as a core bit (defined by reference numeral 27), and at least one second bit stage (see drawing attachment, fig.1) arranged in the form of a step (the step form is defined by the varying diameters of the different bit stages, which is more clearly seen in fig. 5). All of the bit stages have at least one common chip groove as seen in the drawing attachment, fig.1. The chip groove is also defined by the chip flutes 23, 26 and has an even base with the course of the chip groove having a spiral shape (see drawing attachment, fig.1). The chip groove also has flanks (defined by the right and left edges of the groove, which is also defined by the chip flutes 23, 26). The flanks are of unequal height (see drawing attachment, fig.1); the left edge of the chip groove is higher than the right edge of the chip groove). The flanks of the chip groove are in a diagonal orientation with respect to the groove base (see drawing attachment, fig.1), and the flanks have a rounded shape about the central axis 20 (see drawing attachment, fig.1). The path of the chip groove increases in diameter through the successive bit stages as can be seen in the drawing attachment, fig.1 (the increase in diameter can be more clearly seen in fig. 5), which forms an imaginary cone (the imaginary cone is defined by the tool having a cone shape as seen in figs.1, 5 of the drawing attachment). The depth of the chip groove has virtually the same depth throughout the bit stages as can be seen in fig.1 of the drawing attachment; the chip groove having the same depth throughout the tool can also be seen in fig. 2 of the drawing attachment.

Allowable Subject Matter

Claims 19 and 23-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 20-22 and 26 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ali Abdelwahed whose telephone number is (571) 272-4417. The examiner can normally be reached Monday through Friday from 10:00 A.M. to 6:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea Wellington can be reached on (571) 272-4483.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.

AA
11/11/2004


A. L. WELLINGTON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700

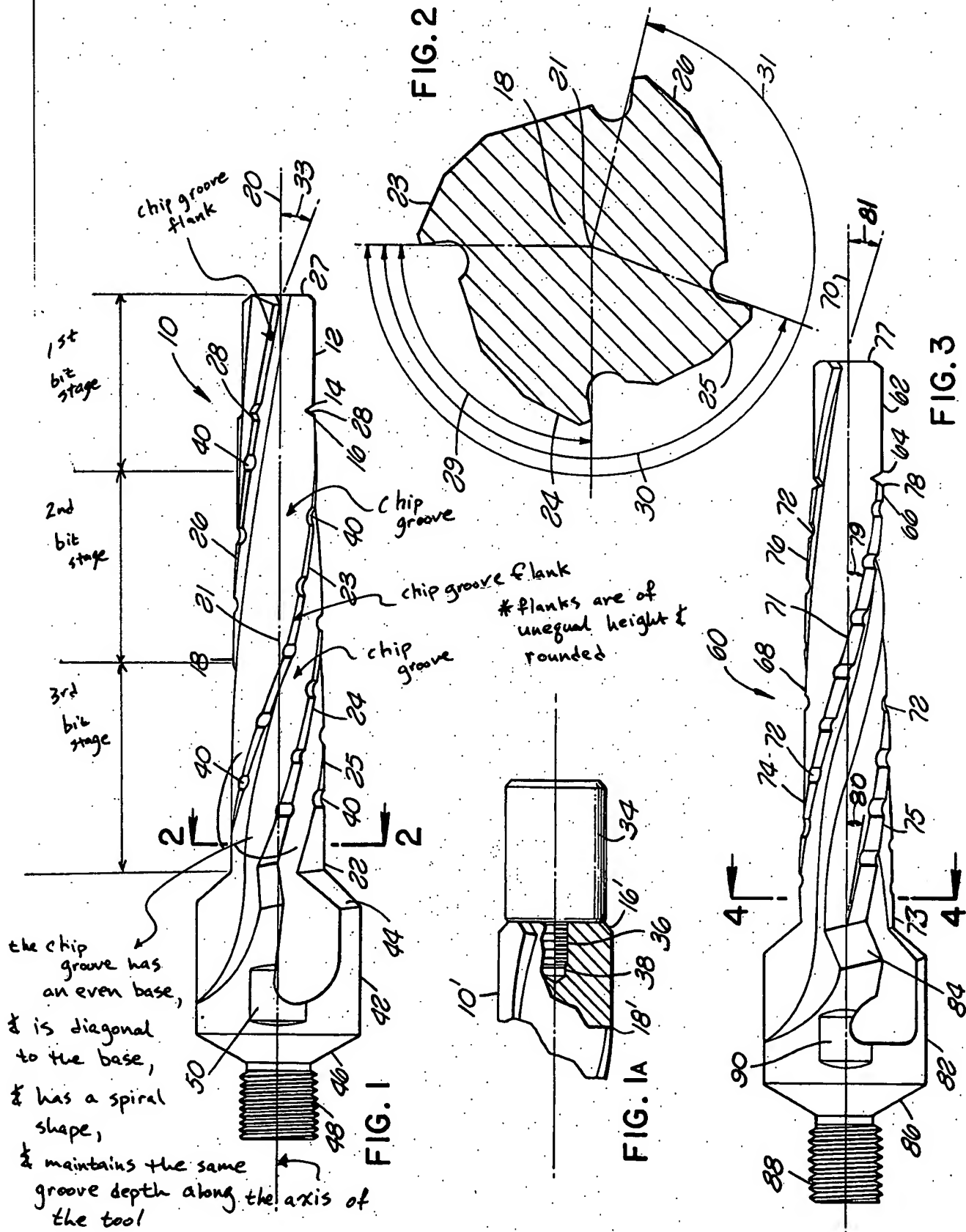
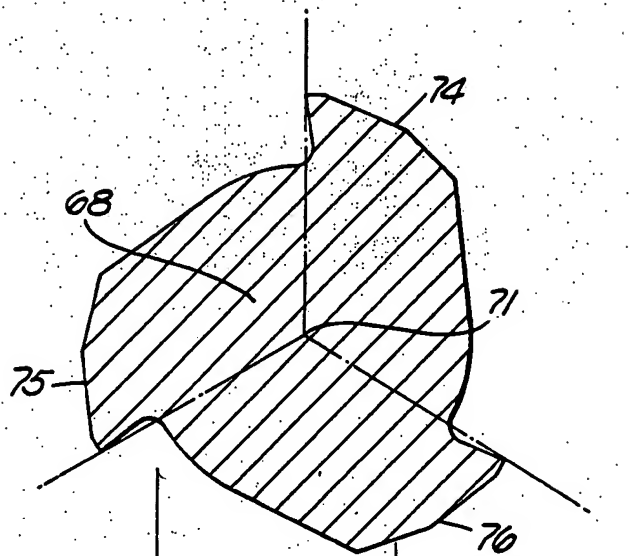


FIG. 4



* the successive bit stages are increasing in diameter

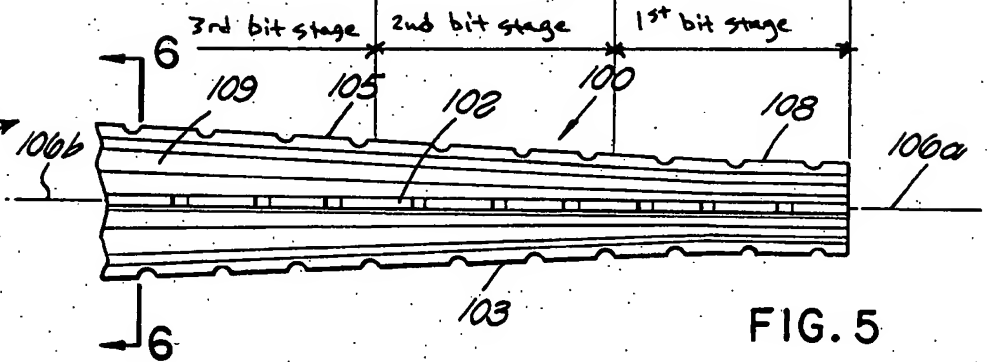


FIG. 5

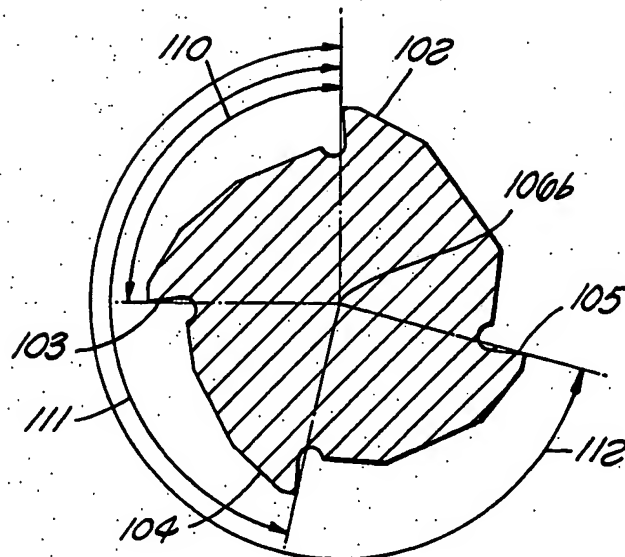


FIG. 6